AMENDMENTS TO THE CLAIMS

8. (Currently Amended) A transistor device having a gate electrode overlying a gate dielectric formed directly on a semiconductor substrate, the gate dielectric comprising:

a first dielectric material having a first dielectric constant; and

a second dielectric material having a second dielectric constant different from the first

the first and second dielectric materials being scalable for a set of feature size technologies, the set of feature size technologies defined by a gate length in the range of 25–150 70 nm, and

wherein the first material thickness and the second material thickness are determined by the relationship

$$t_1/k_1 + t_2/k_2 = t_{OX}/k_{OX}$$

wherein

t₁ is the first material thickness,

t2 is the second material thickness,

 $t_{\mbox{\scriptsize ox}}$ is the minimum thickness for a gate dielectric of silicon dioxide for a

chosen gate length,

k₁ is the dielectric constant for the first dielectric material,

k2 is the dielectric constant for the second dielectric material, and

 k_{OX} is the dielectric constant of silicon dioxide.

- 9. (Original) The transistor of claim 8, wherein the second dielectric of the gate dielectric has a dielectric constant greater than the first dielectric constant.
- 10. (Original) The transistor of claim 8, wherein the first material of the gate dielectric has a first thickness and the second material of the gate dielectric has a second thickness, the combination of the first thickness and the second thickness defining a total thickness less than one-third of a length of the transistor gate.

11. (Canceled)

12. (Previously Amended) The transistor of claim 8, wherein the first gate dielectric material is selected from one of HfO₂ and ZrO₂.

13. (Original) The gate dielectric of claim 8, wherein the second dielectric material is -selected-from-one-of-BST and-PZT.

14. (Original) The gate dielectric of claim 8, further comprising a third dielectric material having a third dielectric constant.

15. (Currently Amended) An apparatus comprising:

a semiconductor substrate having a transistor device formed thereon, the transistor device having a gate dielectric disposed directly between a surface of the substrate and a gate electrode comprising:

a first dielectric material having a first dielectric constant; and

a second dielectric material having a second dielectric constant different from the first dielectric constant,

the first and second dielectric materials being scalable for each of a plurality of feature size technologies, having a gate length in the range of 25–15070 nm, and

wherein the first material thickness and the second material thickness are determined by the relationship

$$t_1/k_1 + t_2/k_2 = t_{OX}/k_{OX}$$

wherein

t₁ is the first material thickness,

t2 is the second material thickness,

tox is the minimum thickness for a gate dielectric of silicon dioxide for a

chosen gate length,

k₁ is the dielectric constant for the first dielectric material,

 k_2 is the dielectric constant for the second dielectric material, and k_{OX} is the dielectric constant of silicon dioxide.

- 16. (Previously Added) The apparatus of claim 15, wherein the second dielectric constant is greater than the first dielectric constant.
- 17.—(Previously-Added)—The apparatus of claim-15, wherein the first material has a first thickness and the second material has a second thickness, the combination of the first thickness and the second thickness defining a total thickness less than one-third of the length of a transistor gate adapted to overly the gate dielectric.
 - 18. (Canceled)
- 19. (Previously Amended) The apparatus of claim 15, wherein the first gate dielectric material is selected from one of HfO₂, BaO, La₂O₃, Y₂O₃, and ZrO₂.
- 20. (Previously Added) The apparatus of claim 15, wherein the second dielectric material is selected from one of BST and PZT.
- 21. (Previously Added) The apparatus of claim 15, further comprising a third dielectric material having a third dielectric constant.